Original Research

Knowledge levels and behavior of women related to breast milk and breastfeeding

Breast milk and breast-feeding

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Abstract

Aim: Breast milk should be given alone for the first six months and after six months with supplementary food for at least two years. In this study, we aimed to evaluate the level of knowledge and behavior of women related to breast milk and breastfeeding of 0-24 months old babies.

Materials and Methods: This cross-sectional analytical study was conducted on 401 women. Sociodemographic characteristics of mothers were questioned, a questionnaire including questions about breast milk and breast-feeding knowledge levels and behaviors was applied.

Results: Infants born normally were introduced earlier to breast milk after delivery compared to infants born by cesarean section (p<0.001). Premature infants have started to take breast milk later than the infants born mature (p<0.001), and the rates of taking only breast milk in the first six months were low (p<0.001). The breastfeeding rate of working mothers was lower than housewives (p=0.036). While the normal spontaneous delivery rate was high in non-working mothers, the rate of cesarean section was higher in working mothers (p=0.021). The frequency of exclusive breastfeeding in the first six months, when babies aged between 6-24 months (n=339) were evaluated, 71.1% (n=241) took only breast milk during the first six months. Fathers with higher levels of education were more positive and supportive of breastfeeding than the fathers with lower education levels (p=0.028).

Discussion: In conclusion, starting breastfeeding educations from pregnancy, reducing the incidence of cesarean sections without indications, encouraging normal spontaneous delivery, and motivating and raising awareness of mothers with premature infants will positively affect breastfeeding.

Keywords

Breastfeeding; Mother; Infant; Breast milk; Knowledge level

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Introduction

Nutrition is very important in the first years of life, especially in the first months. Breast milk is uniquely suited to the human infant, both in its nutritional composition and in the nonnutritive bioactive factors that promote survival and healthy development and should be given alone for the first six months and after six months with supplementary foods for at least two years [1]. Available help from the mother, via the transfer of immunity through breastfeeding assists the infant's immune system during this susceptible time [2-5]. Breastfeeding provides protection against childhood diseases including asthma, gastroenteritis, and sudden infant death syndrome [6]. The early benefits of breastfeeding extend throughout the life course to further protect the health of a mother and her infant by reducing the longer-term risk of certain cancers and other chronic diseases [7, 8]. The disadvantages of not breastfeeding have both short- and long-term consequences, including an increased risk of infection, immunological diseases, allergies, sudden infant death syndrome, obesity, leukemia/lymphoma, and diabetes [9, 10]. Many children in the world die every year because of preventable diseases. Most of these deaths occur within the first year [11]. Promoting and supporting breastfeeding is an important public health intervention, with multiple health benefits for infants and mothers which results in prescriptive recommendations for breastfeeding based on nutritional considerations, combined with recent evidence of health effects of infant feeding practices. The World Health Organisation (WHO) recommends mothers to exclusively breastfeed their infant for 6 months, followed by continued breastfeeding alongside complementary feeding for 2 years [8,11,12]. Exclusively breastfeeding decreased from 42% in Turkey Demographic and Health Survey (TDHS)-2008 to 30% in TDHS-2013. Therefore, although breastfeeding is common in Turkey, only exclusive breastfeeding remains well below the desired rate. Artificial nutrition with formula milk and early onset of other fluids have been frequently encountered. In addition, bottle nursing is widely preferred in our country. These findings showed that trainings on breast milk and infant nutrition should be continued continuously and effectively [13]. In this study, we aimed to evaluate the knowledge levels and behaviors related to breast milk and breastfeeding in women with 0-24-months old baby. In addition, we planned to increase the awareness of mothers about breastfeeding and breast milk during the research and to evaluate what can be done on this subject.

Material and Methods

Type, place and universe of the research

This research is an analytical cross-sectional study and was applied to mothers who came to the breastfeeding room while waiting for the examination order between 07.01.2016-07.01.2017 in the training and research hospital. Participants were selected among mothers with infants 24 months old or younger. Mothers under the age of 18 and who did not want to participate in the study were excluded from the study. The study was completed with a total of 401 mothers.

Research Sample

In previous studies, the incidence of taking only breast milk for

the first 6 months in our country has been found as 37% [14]. In our study, since the number of individuals in the universe is unknown, the number of subjects required to be included in the study was calculated as 358 using the "n = t2.p.q/d2" formula. In line with this calculation, it was planned to include in our study at least 358 individuals aged 18 and over. It was planned to include at least 404 people, adding a 10% share due to the possibility of incomplete filling out the questionnaire and refusal to participate in the study. However, the planned date was abided and the data collection process of the study was completed with 401 individuals who applied in this period.

The Objective of the Study

The first two years of age are of a critical period for breastfeeding. The knowledge of mothers about infant feeding is the behavior influenced by their perceptions and beliefs. In this study, we aimed to understand this critical process affecting mothers' decision-making, to evaluate the knowledge level and attitudes of mothers with 24-months and younger infants about breastfeeding, in order to emphasize the importance of breastfeeding and increase the awareness of mothers about this subject.

Ethical Approval of the Study

The study was approved prior to the initiation by the decision of the Ethics Committee of the Meram Medical Faculty of Necmettin Erbakan University with the decision dated 06/26/2015 and numbered 2015/291. The participants were informed about the study and their written and verbal consent was obtained according to the principles of the Helsinki Declaration.

Inclusion Criteria

Mothers who agreed to participate in the study, aged over 18 years of age, whose babies were 24 months or younger at the time of performing the questionnaire were included.

Exclusion Criteria

Mothers who refused to participate in the study, aged under 18 years of age, malignancy, psychiatric disease, disability to answer questions, having babies older than 24 months were excluded from the study.

Data Collection Tools

Before starting to collect the data, 15 mothers who met the inclusion criteria were pre-tested using the questionnaire. Then the necessary corrections and arrangements were made and the questionnaire was applied. Participants were informed about the study at the beginning, informed consent form was taken and questionnaires were filled with face to face interview technique. Each survey was completed in an average of 15-20 minutes.

Questionnaire Application

In our study, the questionnaire test technique was used as a data collection method. Mothers were asked about their sociodemographic characteristics (age, educational status, occupation, place of residence, educational status and occupation of their spouses, etc.), birth week, birth type and weight of the infant. When assessing the approach to breastfeeding the infant, it was asked about the time of starting breastfeeding, the first food taken after the birth, about the baby's intake of only breast milk for the first six months, the total duration of breastfeeding, and when and with what foods they switched

to additional food. In order to examine the factors affecting breastfeeding, they were asked whether they had received breastfeeding education, the sources of knowledge if they had received education, the presence of grandmother at home, the use of pacifiers and bottles, and they were asked one figured question to evaluate the correct breastfeeding technique. On the last page of the questionnaire, 17 questions were asked about breast milk as true (T) or false (F).

Statistical Analysis

Data were analyzed using SPSS 22.0 package program. After the error control of the data was performed through the same program, statistical analysis was performed. Frequency, mean, standard deviation, median, minimum and maximum values were calculated. In the comparison of categorical data, a chi-square test was used. Results were evaluated at a 95% confidence interval and statistical significance was evaluated at a level of p<0.05.

Results

The mean age of 401 mothers included in the study was 28.1 ± 5.7 years. When education levels were examined, 61.8% (n = 248) were educated in secondary school and above, 38.2% (n=153) were educated in primary school and below, and 90.3% (n=362) were housewives (Table 1). The delivery place was the hospital with the help of health personnel with a rate of 97.5% (n=391). The mean age of the babies of the mothers in the study was 13.4 ± 6.7 months, 52.6% (n=211) were girls, 47.4% (n=190) were boys, 79% (n=317) were born after the 37th week, 21% (n = 84) were born at 37th week or earlier. Among the babies, 78.6% (n=315) had normal birth weight, 18.5% (n=74) had low birth weight, 3% (n=12) had excessive birth weight, 52.1% (n=209) were born by normal spontaneous and 47.9% (n=192) were born by caesarean section.

When calculating the frequency of taking only breast milk during the first six months, when babies aged 6 to 24 months (n=339) were evaluated, 71.1% (n=241) took only breast milk during the first six months, while 28.9% (n = 98) took foods other than breast milk. While 77.8% (n=312) of the mothers gave breast milk only through breast-feeding, 22% (n=89)

Table 1. The relationship between some parameters and first breastfeeding time after birth

	First Breastfeeding Time						
	First half hour		Within one to two hours		Two hours later		р
Type of delivery	n	%	n	%	n	%	
Normal spontaneous	162	77.5	33	15.8	14	6.7	<0.001
Caesarean delivery	85	44.3	60	31.2	47	24.5	<0.001
Gestational week							
≤37 weeks	32	38.1	20	23.8	32	38.1	<0.001
>37 weeks	215	67.8	73	23.0	29	9.1	<0.001
Birth weight							
Low birth weight babies (<2500gr)	32	43.2	19	25.7	23	31.1	
Normal birth weight babies (2500-4000gr)	208	66.0	72	22.9	35	11.1	<0.001
Overweight babies (>4000gr)	7	58.3	2	16.7	3	25.0	

Table 2. Problems of mothers during breastfeeding

Breastfeeding problems	n	%
Nipple problems	119	29.6
Inexperience	25	6.2
Uneducation	6	1.5
Absence of outside breastfeeding environment	6	1.5
Late breastfeeding	2	0.5
No problem	211	52.6
Breast milk and breastfeeding education to state and trainers	n	%
Nurse	220	54.9
Midwife	72	18.0
Doctor	31	7.7
Uneducated about breastfeeding	78	19.5
Choosing the correct breastfeeding method	n	%
Lonely nipple in baby's mouth (False)	49	12.2
Areola with nipple in baby's mouth (True)	352	87.8
Knowing the storage properties of breast milk	n	%
Breast milk can be stored	381	95.0
Breast milk can be stored at room temperature for 3 hours	239	59.6
Breast milk can be stored in the freezer for 3 weeks	214	53.4
Breast milk can be stored in the freezer for 3 months	236	58.9

Table 3. Reasons for non-breastfeeding in the first 3 days and first 6 months

First three days about breastfeeding								
		Only breast milk		Other than breast milk		Total		
	n	%	n	%	n	%		
Employment								
Working	21	53.8	18	46.2	39	100.0	0.505	
Non-working	220	60.8	142	39.2	362	100.0	0.505	
Type of delivery								
Normal spontaneous	142	67.9	67	32.1	209	100.0	0.001	
Caesarean delivery	93	48.4	99	51.6	192	100.0		
Gestational week								
≤37 weeks	39	46.4	45	53.6	84	100.0	0.004	
>37 weeks	202	63.7	115	36.3	317	100.0		

First six months about breastfeeding								
		Only breast milk		Other than breast milk		Total		
	n	%	n	%	n	%		
Employment								
Working	19	48.7	20	51.3	39	100.0	0.175	
Non-working	222	61.3	140	38.7	362	100.0		
Gestational week								
≤37 weeks	35	41.7	49	58.3	84	100.0		
>37 weeks	206	65.0	111	35.0	317	100.0	<0.001	
Number of children								
One child	69	53.1	61	46.9	130	100.0	0.000	
More than one child	196	72.3	75	27.7	271	100.0	0.060	
Grandmother Presence								
Yes	73	59.3	50	40.7	123	100.0	0.838	
No	168	60.4	110	39.6	278	100.0		

were using the milking method for giving breast milk as well as breast-feeding. In addition to breastfeeding, working mothers used milking as a method of giving breast milk more frequently than housewives (p=0.049). The breastfeeding rate was higher in mothers who were non-working (housewives) than working mothers (p=0.036). The frequency of delivery by cesarean section in working mothers was higher than mothers who were housewives (p=0.021).

The frequency of taking only breast milk in the first 3 days after delivery in infants born by normal spontaneous was found to be higher than infants born by cesarean section (p<0.001). The rate of taking only breast milk in the first 3 days after delivery in infants born mature was found to be higher than infants born premature (p=0.004). The breastfeeding rate was higher in mothers who did not use a bottle (p<0.001). The infants born by normal spontaneous way were found to be taking breast milk earlier than those born by caesarean section (p<0.001). The infants born mature received breast milk earlier than those born by cesarean section (p<0.001). As the education level of fathers increased, the rates of support for breast-feeding increased (p = 0.028) (Table 1). The problems encountered by mothers while breast-feeding and their knowledge about breast milk were shown in Table 2. Nipple problems were the most common problems encountered while breast-feeding with a frequency of 29.6%. The frequency of knowing the correct breastfeeding method was 87.8% (n=352). Unfortunately, 19.5% (n=78) of the mothers reported that they did not receive education on breastfeeding. The relationship of giving food other than breast milk in the first three days/first six months with some parameters was shown in Table 3.

Discussion

Breast milk is a primary nutrition for the optimal growth and development of the infant. UNICEF and WHO recommend that breast milk should be given to the infants starting within the first half hour after delivery, and only breast milk should be given for the first six months [11]. The support of mothers' knowledge and attitudes during the breastfeeding period will help implement these recommendations. According to recent data, the rate of breastfeeding of infants during the first months after birth is high in Turkey; however, the total duration of breastfeeding is not at the desired level. While the rate of giving only breast milk in the first six months was 42% in 2008 in Turkey, it has dropped to 30% in 2013. This rate is 71% in our study and is significantly higher than Turkey's general population. According to the TDHS-2013, the median duration of total breastfeeding countrywide was 16.7 months, it was found to be 12.1 months in the present study [13]. In a study conducted by Guo et al in 2010 in China on the effects of breastfeeding on child and population health, the median duration of breastfeeding was 15 months. The reason for this may be related to the average age of 13 months of the babies of the mothers we included in the study [15].

In our study, 61.6% of mothers breastfeed their babies in the first half hour after birth. In the study conducted by Koç et al, examining mothers' views on breastfeeding coaching, the frequency of breastfeeding of the mothers in the first half hour was lower (52%) [16]. In a study of Kutlu et al on the

breastfeeding behaviors of the mothers, 66.1% of the mothers who received breast milk education breastfeed their baby in the first half hour, while this rate was 56.2% for those who did not receive education [14]. In our study, there were both mothers who received and did not receive breast milk education. In a study by Mbada et al in Nigerian breastfeeding mothers, the frequency of breastfeeding in the first hour after birth was 78.3% [17].

In this study, mothers who delivered with normal spontaneous way started to contact and breast-feed their infants earlier after the delivery compared to those who delivered by caesarean section. The first three days after birth are critical for the infant in terms of taking colostrum rich in protective antibodies.

In our study, while breastfeeding rate was 48.7% in working mothers for the first six months, this rate was 61.3% in housewives. There was no relationship between working status and the frequency of exclusively breastfeeding for the first six months. These results were similar to our study in the study of Mbada et al [17].

In a study by Dagher et al, it was found that mothers who returned to work within the first six months were more likely to breastfeed than those who did not start working. The frequency of breastfeeding would not decrease with the milk permit and the support of employers during the day [18]. There are also studies showing that there is a positive relationship between using milk permit after birth and breastfeeding period [19, 20]. In our study, while cesarean rate was high in working mothers (66.7%), normal spontaneous delivery rate was higher in housewife mothers (54.1%). In our study, it was observed that the incidence of taking colostrum of the infants of the mothers who delivered in the normal way was higher than those whose mothers have delivered by cesarean section. Infants born at early gestational week were later introduced to breast milk after delivery and had lower breastfeeding rates for the first six months. Prematurity was decreasing the frequency of giving only breast milk in the first three days and in the first six months and was increasing the frequency of giving supplementary food. Suction and swallowing reflex in the infants develop after the 32th-34th gestational week. Therefore, since premature infants less than 32 weeks of age do not develop the suction reflex, breast milk should be given by milking until the infant is able to receive oral intake [21]. In our study, the frequency of normal spontaneous birth in housewife was higher and the frequency of cesarean section in working mothers was higher. Normal spontaneous delivery should be the first choice unless there is a risky condition for the mother and/or the infant. Today, modern and working women think that the pain and difficulty during labor will be dangerous. The fact that the mothers have a preference for cesarean section may have increased the frequency of cesarean in working mothers [22, 23]. It is known that mothers with spouses who have a high education level and who have an active role in baby care are more prominent in breastfeeding [24, 25]. In our study, 79.6% of the fathers supported breastfeeding. Fathers with high educational level have higher breastfeeding awareness and supported mothers more.

In the first six months, mothers who had more than one child

had higher breastfeeding frequency than mothers with only one child, but it was not statistically significant in our study. In a study conducted by Yanıkkerem et al, it was observed that primipar pregnants had a fear that their milk would be cut prematurely compared to multiparous pregnant women and needed more support in postnatal breastfeeding [26]. In a study conducted with primipar and multipar mothers, it is reported that the doctor, spouse and grandmother are very effective in the attitude and behavior of the mother regarding baby feeding [27].

Conclusion

The breastfeeding rate in working mothers was lower than housewives. While the normal birth rate was high in housewives, cesarean section rate was higher in working mothers. Working mothers have used the breast milking method. The positive and supportive attitudes to breastfeeding of the fathers with high education level were higher than those with low education level. Infants born by normal spontaneous were receiving more colostrum than those born by cesarean section. Premature infants were receiving less colostrum than infants born mature. There are numerous proven medical data on the benefits and necessity of breast milk. In the Convention on the Rights of the Children, it has been stated that breastfeeding is the right of children and parents should be educated before and after delivery. The mother has the right to breastfeed the infant as much as the child has the right to be breastfed. It is important to determine the type and trends of breastfeeding and to determine the factors that affect it. Therefore, breastfeeding trainings should be started from pregnancy, cesarean section should be decreased and indication of normal births should be supported. Mothers with premature babies should be constantly motivated and informed about breastfeeding. Breastfeeding trainings should start at the gestation period and fathers should be informed as well as mothers and awareness should be raised.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

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Conflict of interest

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